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AUTHOR Hirshfield, Claire
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ABSTRACT

An on-going experiment in the classroom use of the Japanese quality circle concept of consensus and group management has been conducted for the past 2 years at the Ogontz Campus of Pennsylvania State University. Quality circles composed of the teacher and eight student volunteers meet weekly for 45 minutes, with each member informing three other students of quality circle activities and soliciting suggestions from them. Initial meetings consist of a description of the history and functioning of quality circles and the development of a code of ethics for the group. Subsequent meetings focus on details of classroom routine and management, the content of the course, and methods of presenting the subject matter and increasing class participation. All of the judgements of the group on these matters are accepted as final and implemented into the classroom. Brainstorming and cause-and-effect diagrams, which are normally associated with industrial models, are used in the quality circle sessions. As a result of the quality circles, the courses involved were substantially revised; contact between the instructor and students was increased; students were convinced that they and their input were important; a bonding occurred among quality circle members; the classes became more responsive; and students' decision-making and problem-solving skills, as well as their willingness to assume responsibility and and obligation, were enhanced. (LL)

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"Quality Circles in the Classroom: An Experiment in the Pedagogical Uses of Japanese Management Methods"

Claire Hirshfield
Pennsylvania State University
Ogontz Campus

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In recent years the impressive productivity level achieved by Japanese industry has attracted world-wide interest. Since 1978 employers' associations in Japan have received a mounting tide of visits from Western businessmen and labor experts intent on learning more about Japanese labor-management relations. To the considerable surprise of the Japanese many of their distinctive techniques, which had in the past been derided as "feudalistic" and "outdated," are being studied by Western experts who have lost confidence in their own "advanced" methodology and are now prepared to "learn from Japan."[1] Current interest in Japanese expertise is also reflected in the best-seller status recently attained by Pascale and Athos' The Art of Japanese Management and by William Ouchi's Theory Z: How American Business Can Meet the Japanese Challenge.[2] Wall Street managers have even made a "hot issue" of The Book of Five Rings: A Classical Guide to Strategy, a seventeenth century samurai-authored volume which is catching on with financial experts today as a sort of life style guide.[3]

There is to be sure a faddish element present in this sudden rage for Japanese techniques, and one may already discern the shape of a backlash in the advertisements currently being run by Motorola, Grace, and Advanced Micro Devices.[4] Between the antipodes of idolotry and racism, however, there lies a broad terrain which can be profitably explored by Westerners whose societies are troubled by class antagonisms and a declining industrial base. A successful country on the rim of Asia may indeed have something to teach us about human relationships and

trust, even in an era of high technology.[5]

Perhaps the single best known and most widely emulated of Japanese imports - and the one with the most potential value for education - is the quality control circle. The quality circle represents a method of tapping the hidden resources of the work force by directly involving teams of cooperating workers and managers in the process of planning and problem solving. A quality control circle is a group of eight to twelve workers doing similar work who volunteer to gather for perhaps an hour each week to discuss problems associated with their jobs and to formulate suggestions for overcoming them. The concept is designed to give workers a real voice in deciding how their work is to be done, on the premise that people who have genuine input in determining the content of the job and its manner of performance will be better motivated to achieve excellence.[6]

Interestingly, the concept of worker involvement which underlies the quality circle was developed in the 1950's by W.E. Demming, an American specialist in statistical quality control, and further refined over the past twenty years by Kaoru Ishihara, an engineering professor at Tokyo University. Ishihara combined the ideas of management experts like Demming and Edward Huran with the theories of social and behavioral scientists like Peter Drucker, Frederick Herzberg, and Abraham Maslow. The result in May 1962 was the first quality control circle. As Ishihara noted: "Quality will be built in when all

the workers understand exactly what they are to do and why, and when they are able to control their activities on the job. Let's listen carefully when people tell us how they can better do their jobs."[7]

Today there are more than one million such circles in Japan, enrolling over eleven million people, all of them directly involved in the decison making processes which affect their work lives. Circles function not only in industry but in banking, retail establishments, and education. Japanese employees and managers alike give the concept much of the credit for the high productivity of people and the extraordinary quality of Japanese goods.

So successful has the technique proved in Japan that hundreds of American companies have begun to experiment with it during the past two or three years. among them General Motors, Sperry Rand Univac, Ford, Westinghouse, Bethlehem Steel, and Martin Marietta. Although some critics have derided quality circles as little more than "a dressed up suggestion box," the skeptics appear to be in the minority. Most observers agree with the Westinghouse vice president who stated after sixteen months of experimentation that "this is one of those rare programs that benefit everyone."[8]

While most existing models of the circle are industrial, the idea is quickly spreading beyond the factory floor. The U.S. Naval Ordinance Station in Louisville, for example, reports excellent success with QC's, one of numerous on-going programs in the military sector.[9] Service industries are also becoming involved in the

movement. The J.C. Penny Company reported forty-five functioning circles in 1981, with the chief facilitator for the Penny Circles program reporting: "There's been a fantastic improvement in morale among the groups, and we've found that people in different lines of work are beginning to communicate with one another on mutual problems."[10] Supermarket chains which can suffer badly from the disaffection of individual employees have also begun to utilize the circle technique to deal with problems ranging from absenteeism to inventory shrinkage. Here too the results have been encouraging. One expert writes: "The basic psychological concept of using quality circles to improve productivity is so sound that it's surprising more supermarkets aren't using it. It's simply a matter of recognizing the dignity of the worker."[11]

Within the past year educators too have become aware that Japanese management techniques may indeed be relevant to their sphere as well. Recently David A. Nichols in the Chronicle of Higher Education challenged the academic establishment to develop the educational equivalent of the quality circle by embracing a participatory model based upon the Japanese style of decision making.[12] School districts in Michigan, Arizona, and Illinois have begun to involve administrators, parents, staff and local agencies in variations of the quality circle technique, often employing trained facilitators to set up, direct, and coordinate the activities of the circles.[13] In 1981 Lane Community College in Oregon became the first institution of higher education to underwrite the training of staff members as facilitators and to

establish a network of campus circles meeting weekly to seek solutions to the everyday problems of work life.[14]

The experiment at Lane is in its initial phase, and results are not yet available. However, there is little doubt that the quality circle philosophy can be adapted to a variety of situations, one of these being the classroom itself - a place where, strangely enough, it has not yet been much in evidence. Resting as the concept does on the premise that everyone who feels the impact of a decison must be involved in making it,[15] it seems logical that the classroom, whether in the senior high school or the university, might be a potentially significant testing ground. Circle volunteers, according to industrial managers, derive an enhanced sense of responsibility from participation, along with an unparalleled opportunity for personal growth and recognition. Such obvious congruence with the goals which educators too pursue is clearly enough to justify the introduction of the quality circle into the classroom, at least on an experimental basis. Indeed, if one simply substitutes the word "student" for the term "worker" in the considerable volume of quality circle literature which has been appearing in past months, one becomes acutely aware of how truly ideal a laboratory the individual classroom may be and how easily its traditionally teacher-centered atmosphere may be democratized by the introduction of Japanese concepts of consensus and group management.

Last year I initiated an on-going experiment in the classroom use of the quality circle. As a teacher of Asian history at the Ogontz Campus of the Pennsylvania State University, I was

quite familiar with the Japanese value structure which underlies the quality circle approach and contributes to its success. However, as I took pains to explain to my class, Japanese emphasis upon the group is not without parallel in American life. Our history and traditions encompass numerous examples of successful collective functioning, most notably in our frontier experience, indicating perhaps that rugged individualism has not always been the unanimous choice of our own people and that a term like "group think" need not always be used pejoratively or derisively.

I prepared myself additionally by reading extensively about Japanese management techniqeus. Ouchi's book along with that of Pascale and Athos proved helpful. I also found useful Ezra Vogel's Japan as Number One and Robert Guillan's The Japanese Challenge.[16] Important too are the numerous articles of J.M. Juran and Peter Drucker which have appeared in business and management journals.[17] In addition I attended several seminars on Japanese management style where problem-solving techniques were taught, quality circles were set up, and role-playing was practiced.

Thus grounded in the new approach and fortified by these experiences, I prepared to introduce the concept of shared management into my classroom at the Ogontz Campus, a freshman-sophomore branch of the Pennsylvania State University. Pascale and Athos note that "consultative decisions result in better decisions" and that "the key is to find common ground and take others' points and use them effectively."[18] Accepting this premise as fundamentally compatible with my own philosophy of teaching and convinced that an active role by students was infinitely preferable to the passive mode characteristic of so many in recent years, I began by setting up a single quality

of eight in one of my classes with plans to expand the program in subsequent terms if the initial experiment proved successful.

Though I was a veteran teacher with twenty-five years' background on both the high school and university levels, I was not prepared for the experience which awaited me - one which transformed the climate and ambience of my classroom, thoroughly democratizing an inherently authoritarian structure and affording me glimpses into the minds and perspective of my students which I had never before enjoyed. The class in which I first made use of the quality circle technique was, appropriately enough, one in the history of traditional East Asia, with its principal focus upon China and Japan before 1800. For my pilot circle I selected eight students whom I knew from previous classes. I might note that, as I personally learned from somewhat painful experience, the entire class must be made aware of the experiment and its purposes, in order to lay to rest any suggestion of elitism or favoritism. Thus, while it was initially more comfortable for me to work with students whom I knew well, I have since concluded that it is preferable simply to call for volunteers and to select at random any eight or ten from among those who respond.

Meetings of the circle were held weekly during the common break which is built into our schedule. Each meeting lasted for about forty-five minutes. Attendance was quite regular, and if an occasional field trip, athletic contest, or study session precluded the presence of a member of the circle from the weekly meeting the explanation for the absence was always proferred in an apologetic tone which proved very reassuring to me, affirming somehow that the students were taking the experiment seriously and that they were

committed to its success.

At the outset we debated expanding the circle to include additional members of the class, but all eight insisted that they preferred the intimacy of a small group and that they felt more comfortable speaking out within a circle of eight than they would in an enlarged one of fifteen.[19] To insure maximum input, however, we decided at the start that each of the eight would keep three members of the class informed about our weekly activities. The circle member would solicit each of his three assignees for suggestions which could in turn be laid before the QC at its weekly meeting for discussion. Thus the circle, limited in size but elastic as well, could be stretched from time to time with no loss of intimacy.

At our first meeting I outlined the history of the quality circle movement, described the function of the circle itself, and suggested that we were jointly going to explore its potential for improving student and teacher performance. I explained that their contributions would be critical and that I would not only accept the group's decision as final in matters affecting classroom management and routine, but that I would also implement all recommendations on which there was consensus. I agreed also to preview material with them that I intended to teach in the week ahead and to seek their opinions on the optimum method of presentation. If in Japan managers can learn to think like workers and workers like managers, then in our situation the teacher would learn to think like a student and the students like a teacher. Improvement in the quality of product would be the inevitable result, if the equation held true.

Among the first tasks which confronted us at the weekly meeting was the drawing up of a code of ethics for the circle. Because of the newness of the experiment, we agreed that certain fundamental courtesies should be observed. Following an open discussion in which a number of suggestions were put forward, we voted on those to be included in the ethical code which would be observed during the life of the circle. Those receiving the highest number of votes were as follows:

Attend meetings regularly.
Be prepared and on time.
Criticize ideas, not people.
Keep assignees informed of all discussions and decisions.
Be prepared to gather data when necessary.
Keep an open mind.

The discussion into which I personally entered as simply one of nine participants effectively broke down any lingering barriers or reserve or hesitation, and our next meetings were largely devoted to matters of classroom routine.

At the start it is essential for the group leader - a role which the teacher obviously assumes - to draw up a weekly agenda and to select those topics which require most urgent and immediate attention. This precludes any possibility that circle meetings will degenerate into chat sessions. Thus I began by soliciting advice on specific issues, always accepting as final the ultimate judgement of the group. In each case the issue was thoroughly discussed, a consensus reached, and the group decision adopted. Students need reassurance from the beginning that a quality circle is not an experience in play-acting but rather a vehicle for achieving control over their own education. Numerous issues concerned us, major and minor.

Should there be extra-credit assignments for motivated students? What degree of choice should be offered in examinations? Should unannounced quizzes be given occasionally? Were narrowly focused questions in examinations preferable to open-ended ones? Might a research paper be substituted for the final exam? Under what circumstances? Who should be offered such a choice? "A" and "B" students only? Everyone?

At the beginning it was I who drew up the weekly agenda and brought up specific questions for resolution. But as the students became more comfortable, they began to introduce subjects for discussion without prodding from me and to provide me with candid feedback concerning what was or was not effective in the classroom. Having promised that I would put into effect any suggestion that the group endorsed, I soon found myself drawing up and distributing to the class daily outlines of my lecture, complete with glossary of crucial names, dates, and terms. Several members of the circle had commented that the somewhat exotic nature of the material we were discussing, the density of the textbook we were using, and their own unfamiliarity with Chinese and Japanese nomenclature made for classroom difficulties. These comments, freely offered within the friendly confines of the circle, stimulated a general discussion out of which came the initial idea for the daily outline. When at the next circle meeting all eight reported that discussions with classmates had been uniformly supportive of the idea, my fate was sealed. While the daily outline represented an additional task for me, it was for the

students gratifying proof that their involvement in the Circle would indeed be worth their time and energy. Moreover, the outlines proved extremely helpful to the class as a whole. As course evaluations later made apparent, the outlines provided students with a guide to the most crucial developments of a particular era, permitting absentees to catch up more easily and helping everyone to make more effective use of a challenging text book.

Another useful suggestion emanating from the QC had to do with that much overworked term "relevancy." In response to one member's casual remark that - immersed as we were in the ancient and medieval world - she sometimes longed for a glimpse of present day East Asia, we discussed ways in which greater contemporainity could be achieved. As a result of this discussion, I began to preface class sessions with occasional "news briefs" and anecdotes culled from newspapers and journals such as The Asia Record and World Press Review. It might be news of a museum show of Japanese woodblocks, or a brief article about the return of Confucius to respectability in China, or a story about the death of an assembly-line worker in Japan at the "hands" of a misprogrammed robot. Whatever the subject, these five minute preambles invariably stimulated an interesting exchange of views in class and acted as well as a kind of reminder to students that while our eyes were focused upon earlier times, the descendants of the people whom we were studying were alive and well and doing important things in the contemporary world.

Too, as the term went on and details of classroom routine

and management were largely settled, the QC began to subject the course itself and my presentation of subject matter to closer scrutiny. I discovered that it was helpful to preview with members material that would be taught the following week and to solicit reactions concerning the pedagogical methods which I intended to use. I discovered, for example, that they wanted me to bring poetry, short stories, and art work to class and to integrate these into my lectures, even if it meant the possible sacrifice of chronological coverage. Sometimes they chose among the poems and stories to be distributed to the class. Additionally, they often previewed films and filmstrips which the pressure of time prevented me from doing, and they advised on which would be most effective in class. Generally I deferred to their judgment in this area, and I was always pleasantly surprised by the discernment and good sense characteristic of their choices.

As the term progressed, I discovered to my amazement that the structure of the course was undergoing a subtle evolution. My customary preoccupation with the political and economic dimensions of history was giving way to a more humanistic approach, as I integrated more and more of the literature and art of the period directly into my classroom presentations.

Much of the reshaping of the course occurred in conscious response to the consensus emerging from QC sessions. Certainly I was careful never to surrender control of the course to my students. But in teaching as in life there are often a number of alternatives which are equally sound and valid. Considering the vastness of the historical canvas, many approaches are possible.

What is important is talking through alternatives and arriving at an understanding about which road to take out of the myriad which await exploration. Thus if the students felt that pausing to read poetry made them experience the T'ang or Han eras in China more deeply than would a detailed analysis of tax policies or border conflicts, then I was willing to accept the fact that what I had been doing in the past could, after all, be done in a different way in the present.

I have subsequently learned that substantial revision of course content is almost inevitable when a quality circle is functioning well. Last term, for example, I established a circle of ten first-term freshmen in an introductory survey of nineteenth and twentieth century European history, a course which I have been teaching for fifteen years. Unconsciously repeating techniques and material which had been successful in the past, I had permitted the course to fall into a set and comfortable pattern. Because it is necessary to present an incredible amount of material in but ten weeks, I have generally spent most of my class time in the nineteenth century, rarely covering anything beyond 1918. But at our first few meetings the circle members convinced me that they were more interested in learning about the two world wars and the sequence of revolutionary upheavals which have transformed their own century than in the Great Reform Bill of 1832 or even the Revolutions of 1848, important topics on which I have generally lavished time and attention, simply because they fall early in the time sequence of the course. My response to their requests involved abandoning my course outline,

inventing new approaches to the problem of chronological coverage, and generally embarking on an uncharted sea of discovery.

I am well aware that elitists and academic snobs might view such dramatic reshaping of a course in response to the pleas of students for immediacy or relevance as an unseemly pandering to the ignorant. I would, however, cite in response the words of the distinguished British historian Michael Howard on his assumption of the Regius professorship at Oxford:

> If our object in teaching history to the laity is to enable them to understand the present by explaining the past ... then we cannot avoid making hard decisions about what we are going to select from the illimitable range offered by the past. ... If a valid definition can be given to the term Modern History ... then it must be the history concerned with the world in which we live today and with the processes that have gone to form it. We are therefore justified in asking how far the subjects we prescribe for study will enhance that understaning and in giving some priority to those for whch a case can most easily be made. The layman has every right to ask the historian not how his own researches contribute to our understanding of the contemporary world, but how do the studies that he, the layman, is required to pursue. And there is a certain obligation on our part to provide a convincing answer.20

Surely my earnest freshmen had felt free enough within the comfortable atmosphere of the Circle to address just such a question to me. And just as surely it was incumbent upon me to frame an appropriate response, even if it involved a substantial revision of a tried-and-true formula.

Of course one cannot assume that every suggestion emanating from a quality circle will be valid. The instructor must be prepared to learn from mistakes and to build upon experience,

even as he seeks to adapt to multitudinous new roles as coach, advisor, salesperson, and cheerleader. I have discovered in the course of two years of experimentation that matters of classroom management can be handled with relative ease, as both I and my students grow more knowledgeable with experience. Thus I find that I now have time to integrate into my circles practices heretofore associated almost exclusively with industrial models, namely brainstorming and cause-and-effect diagramming.

A brainstorming session,which generally lasts for about thirty minutes, is a free wheeling discussion during whose course a specific problem is posed and circle members are encouraged to suggest solutions. The emphasis is on creativity and imagination, and every idea, no matter how far-fetched, is listed on the blackboard. Brainstorming is based on the probability that one person's proposal may stimulate an idea in another mind. In such a session group creativity generally proves greater than that of the isolated individual. Four major rules, which have been endorsed by most experts in the field, are observed in brainstorming:

1. There is no criticism of ideas, all ideas being regarded during the session as equally valid.
2. The wilder the idea the better.
3. Quantity, not quality of idea, is the immediate objective, the broader the spectrum, the better.
4. Combinations and modifications are welcome, with members encouraged to add on thoughts or to combine and synthesize separate ideas.

When the flow of ideas is exhausted, then the circle begins an evaluation of everything generated during the session, combining some suggestions, discarding others, prioritizing the more valuable, and ultimately framing a recommendation for use in class.[21]

To give a specific example of brainstorming at work, last Spring in a course on the history of fascism and nazism, I was confronted by a class in which discussion proved difficult to stimulate, despite the provocative nature of the material being taught. The question which I posed at a QC meeting was: therefore: "How can greater participation in class discussion be promoted?" This seemed to me a valid subject for a brainstorming session, a judgment subsequently validated by the plethora of useful ideas generated during the ensuing half hour. Why not, one member suggested, on a day when an assigned novel like Wiesel's Night or a book of memoirs like Kogon's Theory and Practice of Hell was to be the subject, form the entire class into a circle, with everyone forced to look into each other's eyes and no one able to hide from sight behind the person in front of him? Why not indeed? This is an idea which, if not overdone, can work beautifully, the mere act of rearranging chairs and furniture suggesting to the students that something of extraordinary importance is under discussion and that their opinions which are being so obviously sought, will be accorded utmost attention and respect.

Another high-priority idea which emerged from brainstorming was one which I personally distrusted but which had to be tried because of the endorsement of the QC. By prearrangement one

member of the Circle would make a truly outrageous statement - i.e.,"Hitler had some good ideas," or "All Germans are guilty of genocide." Another member of the Circle would then proceed to endorse the idea and to cite additional evidence in its favor. This was all carefully planned in advance and stage-managed to elicit maximum response from a somewhat diffident class. Only at the conclusion of the discussion would the two confess that their statements had been calculated to provoke argument and debate and to shatter the passivity of some members of the class. This is a technique which can inflame emotions, and it must be approached cautiously, as I pointed out. But try it we did, the statements carefully framed by mutual consent of the QC to incite debate without overly stimulating passion. On this as on most other occasions the students themselves proved more than adequeate to the responsibility they had assumed on joining the quality circle.

Related to brainstorming is another technique which I have found useful, the cause-and-effect diagram. The diagram, also known as a "fishbone" because of its appearance, is constructed either on a large paper easel sheet or on the blackboard while a problem is being brainstormed for possible causes.[22] A query such as "How can lateness or absence from class be reduced?" is susceptible to this type of technique with a variety of causes offered, the major ones diagrammed, minor ones added to the diagram in fishbone style, and a member of the Circle volunteering to investigate the weight to be assigned to each of the potential causes through data gathering among

the class at large. Resulting feedback can be very helpful in determining whether factors beyond one's control, such as weather or a flu epidemic, are at fault, or if some specific action can be taken to reduce absence. I learned as a result of cause-and-effect analysis, for example, that a very liberal make-up policy was responsible for above-average absence on examination days. The solution to the problem was obviously nearer at hand than was absence resulting from icy roads or snowstorms.

In sum, on the basis of on-going experimentation with the QC technique over two years, I have come to a number of conclusions about its benefits to a classroom teacher. The circle philosophy, simply put, implies that students like consumers can by their inquiries, suggestions, and complaints plant the seeds for improvement and that one half-good idea, advanced by an individual, can be improved upon incrementally by a group. It is in essence a "bottom-up" philosophy which imposes the heaviest burden upon the instructor who must invest not only time but emotional capital as well.

It is, for example, necessary to plan a weekly agenda with care, to think hard about issues, to learn to choose words with discretion, and to discard beloved classroom practices. It is also necessary to broaden one's way of thinking and responding, to embrace a shift to "other directedness," and to cultivate what the Japanese call "less ego listening." Ouchi writes that "often the skillful leader does more listening than talking. What matters is the skill of observing, the

the pattern of interaction in the group, and knowing when to intervene."[23]

To be sure, as group leader the instructor assumes major responsibility for establishing course parameters and for setting limits on the range of alternatives which the group will explore. But this must be done without the least hint of intelllectual imperialism. Often it is necessary to hold one's own preference in suspension in order to remain a part of the process. However, while moving along with the flow, the leader must sense the best time to intervene in order to guide the discussion to shore. It is the leader who strives for the common ground and who chooses the right words to harmonize divergent perspectives and to integrate them within the framework of a mutually satisfying decision.[24] All of this requires a skill which can only be acquired by diligent practice. And because there are no pedagogical models and no guidelines to follow, one makes mistakes and falls into traps. It must always be remembered that the quality circle is only a structure which one creates principally to implement basic pedagogical values along with the specific goals and objectives of the course. One must guard against becoming so enmeshed in the mechanics of group management that this fact is forgotten. A definition of values and goals must therefore precede the establishment of any structure which is designed to assist in their ultimate realization.

Is the experiment worth the time and effort it demands? At the end of two years of experience with classroom circles I have tried to evaluate the experiment in as objective a

fashion as possible by drawing up a list of merits and weaknesses. Foremost among the benefits is an increase in contact between teacher and student and a greater appreciation of each other's worth. The quality circle successfully communicates to students the sense that they are individually important, and that their opinions matter, no minor achievement today when the all-pervasive atmosphere of anomie so characteristic of a technologically-oriented society seeps inevitably into our classrooms. Thus, the opening of new lines of communication between teacher and student is the most valuable result of the experiment. "It is nice to know that some teachers care about what the student thinks good for a course," one student wrote in his evaluation of the QC experience. "I would like to see you continue the experiment, and I hope it spreads." Another commented: "I feel that it is an excellent way to remove the barrier that usually exists between teacher and student." And a third wrote: "It is nice to know that the teacher cares about the class and what the students learn."

Also important among the benefits is the spontaneous generation of a bonding process among QC members themselves. Trust, loyalty, and mutual commitment appear to be among the by-products of the shared experience. In practical terms at least eight members of the class clearly have a vested interest in making sure that the innovations they have recommended will be successful. Their commitment to the changes in routine and presentation which I introduced meant that there would always

be a safety net in place beneath me, should I appear to be falling flat. Moreover, the lively responsiveness and enthusiasm which radiated from the QC matrix transformed the emotional climate of the class as a whole. Supportiveness, amiability, and good will are as contagious in a classroom as hostility and boredom. Enthusiastic participation by some leads to the greater responsiveness of all. Several members of the class who were generally content to sit silent and withdrawn were stimulated sufficiently by the rising level of student participation all around them that they occasionally shed their customary diffidence and became actively involved in the proceedings.

Finally, I have come to believe that important decision-making skills and problem-solving techniques are developed by participation in a quality circle, along with a greater willingness to assume responsibility and obligation. Students see that there is a direct relationship between voluntary assumption of responsibility and the increased power over outcomes which flows from it.

In a recent article Arthur W. Combs identified the human needs which liberal education will have to satisfy in the years ahead. Among them he listed the need of students to learn effective problem-solving, a "creative process" which may be best approached "when problems are real and personally relevant, when students feel solutions are reasonably within their capacities, and when results are immediately discernible." Equally important is the development of a genuine sense of responsibility along with social interaction. "Responsibility is

learned from being given responsibility," he wrote, "never by having it withheld." And further:

> Learning responsibility requires confronting problems, making choices, being involved in decisions, accepting the consequences of one's actions, learning from mistakes - not with respect to artificial problems but real ones. ... Similarly, effective social interaction requires the student to experiment, think about and explore ideas with others. It is learned from cooperation, rarely from competition.[25]

If the nineteen eighties confront educators with the challenge of an information explosion and an acceleration in the pace of change, as Combs maintains, new learner-centered approaches to students are increasingly essential. The quality circle is one such approach, its special value clearly perceptible in those areas which Combs defines as critical: problem-solving, development of a sense of responsibility, and social interaction.

Finally, it is necessary to sound a cautionary note or two. Where a specific body of factual material must be transmitted in a limited time and where certain incremental skills must be developed, the circle technique may require extensive modification. I discovered, for example, that I did not cover as much in purely historical terms in classes where I utilized a quality circle. One must therefore be willing to trade off comprehensiveness of coverage for an increase in student participation, a sacrifice which is perhaps less significant in some disciplines than others.

Additionally, the circle technique is easier to introduce in the college classroom than that of the high school. Its implementation on the secondary level will require careful planning and flexible scheduling. Younger students must be more thoroughly

briefed and prepared for the responsibilities they are assuming. Quality circle sessions in high schools may indeed require tight structure and well defined parameters. Teachers too will need preliminary training in the technique in order to avoid its potential pitfalls.

It is important to note, however, that at the heart of the quality circle method lies a simple truth: people count. Ours is a society marked indelibly by the depersonalization of high technology and by the loss of the sense of community and cohesion so typical of our people in the past. The relationships which we are able to forge with each other - the bonding of teacher to student and of student to fellow-student - are infinitely precious. The generation of small group loyalties can indeed create oases of refuge in our classrooms from the alienation and isolation implicit in much of modern life.

Our students arrive in our classrooms today with limited intellectual baggage and with little interest in the liberal arts. Any method which increases a student's involvement in the process of his own education - as the quality circle has the potential for doing - is well worth the commitment of time and energy which it requires. The philosophy on which it rests has achieved important breakthroughs in the workplace. It may do the same in our schools.

[1]Japan Economic Review, 15 Oct. 1979, p. 8.

[2]Richard Tanner Pascale and Anthony Athos, The Art of Japanese Management (New York, 1981); William Ouchi, Theory Z: How American Business Can Meet the Japanese Challenge (New York, 1981).

[3]Jacqueline Wilson, "Wall Street: A Strategy for Gentlemen Warriors," New York Times, 13 Sept. 1981.

[4]On the backlash see for example William S. Anderson, "Don't be Blinded by the Rising Sun," New York Times, 4 April 1982; Steven V. Roberts, "In Ohio the Enemy is Japan," ibid., 25 April, 1982.

[5]Time, 30 March 1981, p. 60.

[6]Quality Circles: A Dynamic Approach to Productivity Improvement (Bureau of Better Business Practice, Waterbury, Connecticut, 1981), pp. 4-14 (hereafter cited as Quality Circles: A Dynamic Approach); Donald L. DeWar, Quality Circles: Answers to One Hundred Frequently Asked Questions (Red Bluff, Cal., 1979), p. 9. See also Newsweek, 30 March 1981, p. 60.

[7]Quality Circles: A Dynamic Approach, pp. 10-11.

[8]Time, 28 Jan. 1980, p. 65. See also Working Woman, Oct. 1981, pp. 90-91.

[9]Quality Circles: A Dynamic Approach, pp. 30-31.

[10]Ibid., p. 53.

[11]Dan Shannon, "Productivity: Quality Circles for Supermarkets," New York Times, 18 April 1982.

[12]David A. Nichols, "Point of View," Chronicle of Higher Education, 1 Sept. 1982, p. 72.

[13]ASCD Update, 3 Feb. 1982, pp. 1, 3. See also James S. Bonner, "Applying Japanese Management Strategies to Educational Management," Michigan School Board Journal, Dec. 1981, pp. 21-23.

[14]Larry Romine, "Quality Circles That Enhance Productivity," Community and Junior College Journal, vol. 52, no. 3 (Nov. 1981), pp. 30-31.

[15]Ouchi, p. 37.

[16]Ezra Vogel, Japan as Number One: Lessons for America (Cambridge, Mass., 1979); Robert Guillan, The Japanese Challenge (New York, 1970).

[17]See especially Peter Drucker, "Behind Japan's Success," Harvard Business Review (Jan.-Feb., 1981), 83-91; J. M. Juran, "Product Quality - A Prescription for the West," Pt. I, Management Review (June 1981), 9-14, Pt. II (July 1981), 57-61.

[18]Pascale and Athos, pp. 111, 113.

[19]Pascale and Athos maintain that "groups, as they increase in size beyond eight to ten people, have increasing difficult in preserving personal and emotional connectedness (ibid., p. 126).

[20]Michael Howard, "The Lessons of History," The History Teacher, vol. 15, no. 4 (Aug. 1982), p. 498.

[21]Quality Circles: A Dynamic Approach, pp. 34-36.

[22]Ibid., pp. 47-5.

[23]Ouchi, p. 92.

[24]Pascale and Athos, pp. 132-33.

[25]Arthur W. Combs, "What the Future Demands of Education," Phi Delta Kappan, vol. 62, no. 5 (Jan. 1981), p. 372.

ERIC Clearinghouse for Junior Colleges
8118 Math-Sciences Building
University of California
Los Angeles, California 90024

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